

USSR

KARDASH, I. B., et al., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii,
No 12, 1972, pp 124-128

stations and submitted to the municipal or oblast stations where they were recorded and checked again. Next, they were sent to the Belorussian Institute of Epidemiology and Microbiology for the third check, and from there to the Computer Center of Belorussia's Central Statistical Administration where the data were transferred on perforated tapes and processed on the computer. The method yielded statistical charts with more accurate and detailed information than was ever available in the past. The method was approved by the Ministry of Health USSR and, in 1970, it was introduced on a permanent basis in epidemiological stations throughout the Belorussian SSR.

1/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CLINIC AND TREATMENT OF FUNNEL AND PIGEON BREAST -U-
AUTHOR--KNYSH, I.T. *K*
COUNTRY OF INFO--USSR
SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 4, PP 27-32
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ORTHOPEDIC SURGERY, SUTURE, PROSTHETIC DEVICE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1727 STEP NO--UR/9115/70/000/004/0027/0032
CIRC ACCESSION NO--AP0123531
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123531

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEMS OF SYMPTOMATOLOGY AND TREATMENT OF 27 PATIENTS WITH FUNNEL AND 2 PATIENTS WITH PIGEON BREAST ARE DISCUSSED IN THE ARTICLE. IN THIS SERIES THERE WERE 23 MALES AND 6 FEMALES WITH AGES RANGING FROM 2 TO 22 YEARS. OF 27 PATIENTS WITH FUNNEL CHEST, 19 PATIENTS UNDERWENT OPERATIVE TREATMENT (8 PATIENTS WERE NOT OPERATED ON BECAUSE OF CONTRAINDICATION AND REFUSAL FROM OPERATION).

TWO PATIENTS WITH PIGEON BREAST WERE TREATED OPERATIVELY. THE OPERATION OF RECONSTRUCTION OF THE ANTERIOR THORACIC WALL WAS DONE TO ALL OF THEM. EXTERNAL FIXATION WITH TRACTION SUTURES FIXED ON THE CARCASS HAS BEEN USED IN PATIENTS TO MAINTAIN THE CORRECTED POSITION. IN 10 PATIENTS FIXATION WAS EFFECTUATED WITH METAL PLATES. THE TECHNIQUE OF OPERATION AND MANAGEMENT OF PATIENTS IN THE POSTOPERATIVE PERIOD IS DESCRIBED. THE PERIODS OF FOLLOW UP AFTER OPERATION FLUCTUATED FROM 1 TO 4 YEARS. A GOOD COSMETIC AND FUNCTIONAL END RESULT WAS ACHIEVED IN 17 PATIENTS WITH FUNNEL AND 2 PATIENTS WITH PIGEON CHEST. A PARTIAL RECURRENCE OF THE DEFORMITY ENSUED IN 2 PATIENTS WITH FUNNEL BREAST IN WHOM EXTERNAL FIXATION HAS BEEN PERFORMED IN THE POSTOPERATIVE PERIOD.

FACILITY: KIEV INSTITUTA
EKSPERIMENTAL'NOY I KLINICHESKOY ONKOLOGII AND ORTOPEDICHESKOGO
OTDELENIYA 2-Y BOL'NITSY SHEVCHENKOVSKOGO RAYONA KIEVA.

UNCLASSIFIED

USSR

UDC: 621.373.431(088.8)

KHYSH, V. A.

"A Device for Charging a Storage Capacitor"

USSR Author's Certificate No 274159, filed 23 Jan 69, published 22 Sep 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G275 P)

Translation: A device is proposed for charging a storage capacitor in a power pulse oscillator from a source of direct current. The device contains a paraphase self-excited oscillator which controls a static converter of DC to AC voltage whose thyristors are connected in a parallel inverter circuit (with buffer capacitor and linear choke in the supply circuit), and a power transformer. To reduce the overall dimensions of the supply source and improve efficiency, the anodes of one pair of rectifiers and the cathodes of another are connected to the output winding of the power transformer, the cathodes of the first pair of rectifiers being connected to two series-connected capacitors whose common point is connected to the anodes of the second pair of rectifiers, and through an additional linear choke to the negative lead of the storage capacitor. The positive lead of the capacitor is connected to the anodes of the first pair

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KNYSH, V. A., USSR Author's Certificate No 274159

of rectifiers through two additional thyristors whose controlling electrodes are connected to the self-excited oscillator of the converter. To reduce the nonuniformity of the load on the supply source, the static converter contains two or more single-phase inverters, the controlling elements of their thyristors being connected to the output of the self-excited oscillator with a corresponding number of phases. The additional linear chokes of the second and subsequent inverters are connected to the negative lead of the storage capacitor, the cathodes of the additional thyristors are interconnected, and the controlling electrodes are connected to the self-excited oscillator.

USSR

UDC 621.314.14(088.8)

NAYMUSHIN, V.A., NIKOLAYEV, A.G., KNYSH, V.A., KONCHENKOV, P.YE.

"Device For Increase Of A-C Voltage Without A Transformer"

USSR Author's Certificate No 261472, filed 7 June 68, published 28 May 70 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B533P)

Translation: A source of a-c voltage is connected with a load across an inductive-capacitance converter. There is a rectifier bridge, the input diagonal of which is connected in parallel to one of two series-connected capacitors of the converter, and the output is connected between the collector and emitter of a transistor. Between the inductive element of the filter and the emitter of the transistor, a network [tsepochka] is connected of a series-connected transistor and a variable resistor, the movable arm of which is connected across a stabilatron with the transistor base. After breakdown of the stabilatron, the transistor is opened and shunting of the capacitor connected with the bridge takes place. The oscillation frequency of the converter and its Q-factor are reduced, which is accompanied by a reduction of the voltage at the load. As a result, the average value of the voltage at the load is maintained constant. Regulation of the output voltage of the device is also possible. 1 ill. V.Sh.

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UDC 615.616.24-003.656.6

USSR

KHAMITOVA, V. Z., KNYSH, V. S.

"Problem of Pneumoconiosogenic Properties of Different Dust Samples from Superphosphate Production"

Tr. NII krayev. patol. KazSSR (Works of the Scientific Research Institute of Marginal Pathology of the Kazakh SSR), 1972, No 23, pp 93-95 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.897)

Translation: For 12 months, rats were administered intratracheally 50 mg of simple superphosphate dust suspension containing 25 percent U_2O_5 , 40 percent CaO , 2 percent Al_2O_3 and Fe_2O_3 , 2 percent F and 5-19 percent SiO_2 (first group), granulated superphosphate of almost the same composition (second group) and ammophos containing an admixture of NH_3 (third group). In the animals in the first group after one to three months marginal pulmonary emphysema, desquamation and tearing away of the bronchial epithelium, constriction and sometimes obliteration of the vessels, and so on were detected. After 6-12 months, exudate appeared in the lumen of the bronchi and alveoli, connective tissue nodes and indurations

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KHAMITOVA, V. Z., KNYSH, V. S., Tr. NII krayev. patol. KazSSR, 1972, No 23, pp 93-95

developed in the pulmonary parenchyma comprising lymphoid cells and collagenic fibers. In the animals of the second group, analogous, but more sharply expressed symptoms of the development of nodular-diffuse pneumoconiosis were noted. This process developed still more intensely in the animals of the third group. It is considered that the primary toxic effect is caused by the P_2O_5 , F and NH_3 .

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USSR

UDC 669.15-194:669.295:621.785.6:
:539.389.3:620.183.6

GRINBERG, B. G., PASHKOV, P. P., PINCHUK, P. A., KNYSHEV, Yu. V.,
and SHTEYN, L. M., All-Union Correspondence Construction Engineer-
ing Institute

"X-Ray Microanalysis of the Diffusion Layer in Titanium-Steel
Bimetal"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallur-
giya, No 7, 1973, pp 133-135

Abstract: Investigation results are presented of diffusion proces-
ses in the bimetal VT1-1 titanium + EI702(N36TYu) alloy. The bime-
tal was produced by means of joint rolling of EI702 alloy, heated
in argon, with cold VT1-1 titanium. The thickness of the bimetal
was 0.12-1.2 mm, that of the covering was 10% of this. Parts
from the bimetal were hardened from 950-1000°C and subjected to
hardening temper (aging) at 650-700°C for 2-6 hrs. The redis-
tribution of iron, nickel, and chromium from EI702 alloy into
VT1-1 titanium was determined. By comparison of the microhardness,

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GRINBERG, B. G., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1973, pp 133-135

the electron-topography, and the characteristic X-ray radiation with concentration redistribution curves of iron, nickel, and chromium, the character and regularities of the formation of diffusion zones in the process of production and of heat treatment of the bimetal were exposed. One figure, three bibliographic references.

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UDC 681.325.65

USSR

VAL'SKIY, B. G., KNYUPFER, A. P., SOLOPCHENKO, G. N.

"A Device for Automatically Measuring the Statistical Characteristics of Random Errors of Analog-Digital Converters"

USSR Author's Certificate No 319065, Division H, G, filed 8 Jun 70, published 25 Jan 72 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B329 P)

Translation: This invention, which applies to the field of measurement technology, is designed for measuring the integral distribution function of analog-digital voltage-to-code converters and digital voltmeters for practically any ratios between the mean square deviation of the error and a unit in the least significant place of the instrument code. A device is known for automatically measuring the statistical characteristics of random errors of analog-digital voltage-to-code converters which contains the instrument to be studied, a control device, and an arithmetic unit. However, this device can be used to determine the statistical characteristics of random errors only for the case in which the noise level at the input to the instrument is greater than its digital error. The purpose of the invention is to enable measurement of the integral distribution function of random

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USSR

VAL'SKIY, B. G., et al., USSR Author's Certificate No 319065

errors in analog-digital voltage-to-code converters. In order to achieve this, a master code-to-voltage converter, digital reset device, and digital comparison circuit are added to the installation. The input of the instrument to be studied is connected to the output of the master code-to-voltage converter, and the counting input of this converter is connected to the output of the control device. The separate inputs are connected to the outputs of the digital reset device and to one of the inputs of the digital comparison circuit. The other input of the comparison circuit is connected to the digital outputs of the instrument to be studied, and the output is connected to the arithmetic unit.

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USSR

UDC 621.317.64

KNYUPFER, A. P.

"Methods of Estimating the Accuracy of Digital Voltmeters and Analog-to-Digital Converters During Testing and Inspection"

V sb. Tochnost' radioelektron. apparatury (Accuracy of Electronic Equipment -- Collection of Works), Sb. 1, Moscow, 1971, pp 122-128 (From RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 1, Jan 72, Abstract No 1A359 by B. U.)

Translation: The article considers some methods for experimental estimation of the characteristics of instrumental error, reduced to input, for digital voltmeters and analog-to-digital converters under static conditions, particularly a method for experimental estimation of a univariate, instrumental error distribution law. Two illustrations. Bibliography with 3 titles.

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USSR

UDC 535.376:621.382

POPOV, Yu. V., SHILOV, A. F., MANAK, I. S., KOBAK, I. A., FIGURIN, V. A.

"Nonuniformity of Glow and Percentage Modulation Lengthwise of P-N Junction in GaAs Diodes"

Vestn. Belorus. un-ta (Bulletin of Belorussian University), 1970, Series 1, No 3, pp 63-64 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5B232)

Translation: The results are presented of a study of the nonuniformity of glow and percentage modulation of a p-n junction in GaAs diodes, which can be accounted for by the nonuniformity of distribution of impurities. 2 ill. 4 ref. Summary.

USSR

UDC 621.385.6

KORAK, N. N.

"Investigation Of A System For Shaping An Oscillating Beam"

Vestn. Kiyev. politekhn. in-ta. Ser. radioelektron. (Bulletin Of The Kiev Polytechnical Institute. Radio Electronics Series), 1970, No 7, pp 45-47 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12A184)

Translation: The paper investigates the electrostatic quadrupole of a cylindrical--lamellate system with oblique lead-in of the electrons which form an oscillating electron flow. The experimental dependences of the passage of current on the electrical regime and the dimensions and the conditions of the lead-in of the electrons in the system are presented. 4 ref. Summary.

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KOBAR, STANISLAV

Dep. Chairman
Board International
Bank

CEA INVESTMENT BANK OFFICIAL COMMENTS ON BANK CREATING

Article by Stanislav Kobar, Deputy Chairman of the Board of the International Investment Bank, in "International Investment Bank in Operation", Moscow, Ekonomicheskaya Gazeta, Moscow, No 4, January 1977, p. 20.

The Comprehensive Program adopted by the EIBB provides for further extending and improving cooperation and developing social-economic integration among a number of countries in the area of the CEA countries' currency and financial relations. We attach in particular to the development of a system of long- and medium-term loans in the collective currency (the convertible ruble) through the IIB (International Investment Bank).

This bank in terms of its role and significance differs from capitalist investment banks like the International Bank for Reconstruction and Development, the European Investment Bank, the Inter-American Development Bank, and a number of similar regional banks. In its goals, terms, operations characteristics, and management forms and methods, the IIB is an international lending institution of a new type, one based on democratic management principles, on the principles of the equality and respect for the sovereignty of all bank members.

The IIB's practical operations are effected in accordance with the tasks and functions determined by the agreement on the founding of the bank and its charter.

Overall management of IIB operations devolves on the Council, composed of the representatives of all bank members. It is necessary to point out here that every member country has one vote in the Council, whereas in the International Bank for Reconstruction and Development and similar institutions the number of votes hinges on the share of statutory capital.

The executive organ for managing the bank is the Board.

The achievement of the planned economy in such a manner by the objective necessity for the state to direct all economic activity and thereby intervene in the life of the entire country, especially, regarding the tasks of the development of both the economy of the socialist countries as a whole and the economy of each country separately.

The bank serves the growth of capital investments and hence participates in the development of the material-technical base of the socialist system.

The main basic task is to extend long- and medium-term loans primarily for implementing measures connected with the international socialist division of labor, the specialization and coordination of production, expansion for the expansion of the raw material and fuel base in the joint interest, the construction of objects in other economic branches of mutual interest for the development of the socialist economy, as well as for constructing objects connected with the development of the national economy and for achieving other goals in line with this task.

Long-United objects must correspond to the highest technical level and ensure the output of high-quality goods at world market prices.

In setting up the bank, the founding countries proceeded from the necessity for organically connecting in operations with the other of measures to further develop socialist economic integration, to gradually draw together and even the levels of economic development of the USSR countries, with the achievement of the priority of the high economic level of credit utilization. Accordingly the bank participated in considering with the appropriate organs and banks connected with coordinating the GDR countries' economic plans in the area of capital investments.

In solving the problem of extending credit to implement measures and concrete objects of interest to several bank members, the bank takes into account the recommendations on coordinating the countries' national economic plans and the presence of long-term agreements or other contacts on the construction of enterprises and the sale of output to be produced by them.

Bank loans are of a planned, specific purpose nature and are extended on the basis of repayment terms. Medium-term loans are primarily extended for a period of up to 5 years, long-term loans for a period of up to 15 years, with the participation of the borrower's own means in the funding. In some cases, however, bank loans cover the entire cost of an object.

The annual interest rates on moderate- and long-term loans extend to convertible rubles range from 4 to 6 percent. These rates are markedly

UDC 616.13-002.2

USSR

GVISHIANA, G. S.; KOBAKHIDZE, N. G.

"Dynamics of Shifts in Lipids, Monoamines and the Coagulation System of the Blood During Atherosclerosis Caused by Restriction of Movement"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 60, No 2, Nov 70, pp 445-447

Abstract: Shifts in the composition of lipids, catechol-amines and in the coagulation system of the blood were studied in different periods of experimental atherosclerosis (1, 2, 3, and 4 months). The same indexes were studied in the tissue of the myocardium, liver, and reticular formation of the brain stem of animals at the end of the experiment. At the beginning of the experiment, periodic restriction of movement produced in rabbits an increase in the content of beta-lipoproteins in the blood. It was established that the content of total cholesterol had increased and the lecithin-cholesterol index had decreased at the end of the experiment. In the thalamus, an increase in the

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GVISHIANA, G. S., et al, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 60, No 2, Nov 70, pp 445-447

total cholesterol and beta-lipoproteins was observed, while the lecithin-cholesterol index decreased. The content of beta-lipoproteins in the myocardium and that of total cholesterol in the reticular formation of the brain stem increased. The content of catechol-amines was elevated at the beginning of the experiment. During the first months an increase in the level of free adrenalin was observed, while in subsequent months the level of adrenalin in the blood decreased and that of nonadrenalin increased.

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UDC 616.13--002.2

GVISHIANI, G. S., and KOBAKHIDZE, N. G.

"Dynamics of the Shifts in Lipids, Monoamines, and the Blood Coagulation System Associated With Atherosclerosis Caused by Restriction of Movement"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 60, No 2, Nov 1970, p 447

Translation: Shifts in the composition of lipids and catecholamines and in the blood coagulation system were studied at various times during the onset of experimental atherosclerosis (after one, two, three, and four months). Following decapitation of the animals at the conclusion of the experiment, the same indices were studied in the tissue of the myocardium, the liver, and the reticular formation of the brain stem.

Periodic restriction of movement caused an increase in the beta-lipoproteins present in the blood of rabbits at the beginning of the experiment. An increase in total cholesterol and a reduction of the lecithin-cholesterol index were established at the end of the experiment. An increase in total cholesterol and beta-lipoproteins and a reduction of the lecithin-cholesterol

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USSR

GVISHIANAI, G. S., and KOBAKHIDZE, N. G., Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 60, No 2, Nov 1970, p 447

index were noted in the thalamus. Beta-lipoproteins in the myocardium increased and there was an increase in overall cholesterol content in the reticular formation of the brain stem; the percentage of catecholamines present at the beginning of the experiment was increased. In the first months, free adrenaline generally increased, but in the following months the adrenaline in the blood decreased and the noradrenaline increased.

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CALCULATION OF PLATES OF ARBITRARY PLANFORM ARBITRARILY CLAMPED AT
THE EDGES AND SUPPORTED SPANWISE BY ELASTIC BEAMS -U-
AUTHOR-(02)-KAKUSHADZE, A.M., KOBAKHIDZE, SH.S.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK GRUZINSKOI SSR, SOOBSHCHENIIA, VOL. 57, JAN. 1970,
P. 109-112
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--BOX BEAM, ELASTICITY, FLAT PLATE, THIN PLATE STRUCTURE, GREEN
FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1689

STEP NO--UR/0251/70/057/000/0109/0112

CIRC ACCESSION NO--AP0118667

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118667

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF PROBLEMS OF PLATES OF ARBITRARY PLANFORM AND ARBITRARY END CONDITIONS AND FOR PLATES SUPPORTED AT THE EDGES BY ELASTIC BEAMS. A BASIC SYSTEM OF EQUATIONS FOR PROBLEMS OF THIS TYPE IS DERIVED, AND AN INFLUENCE GREEN'S FUNCTION FOR THIS SYSTEM IS OBTAINED. SOLUTIONS TO THESE PROBLEMS ARE OBTAINED BY THE METHOD OF INITIAL PARAMETERS.

UNCLASSIFIED

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USSR

UDC 612.73.014.45

KOBAKHIDZE, Z. V., Experimental Division, Institute of Health Resorts and
Physiotherapy of Georgia, Tbilisi

"Mechanism of Action of Ultrasonic Oscillations on Smooth Muscles"

Moscow, Voprosy Kurortologii, Fizioterapii i Lechebnoy Fizicheskoy Kul'tury,
No 3, May/Jun 70, pp 248-253

Abstract: The therapeutic intensities of ultrasound lead to functional shifts in the albumin-lipid-carbohydrate structure of smooth muscle, as expressed by changes in absorption of vital dyes. Concurrently changes take place in the content of adenosine mono-, -di-, and -tri- phosphates in smooth muscles. Ultrasound affects phosphorylation processes, which are responsible for resynthesis of ATP. Ultrasound treatment resulted in altered conformational structure of albumin. It is assumed that functional shifts in smooth muscles occur at the molecular level.

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USSR

UD0 621.382.002

TKACHUK, B.V., KOBAL', A.A.

"On The Possibility Of Using Thin Films Of Silicon Dioxide Prepared In A Glow-Discharge For Production Of Low-Temperature Semiconductor Devices"

Elektron. tekhnika. Nauch.-tekhn.sb. Kriogen. elektronika (Electronics Technology. Scientific-Technical Collection. Cryogenic Electronics), 1971, Issue 1(3), pp 163-166 (from RZh:Elektronika i yeye primeneniye, No 10, Oct 1971, Abstract No 10B366)

[No abstract]

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1/2 019 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--EXPERIMENTAL STUDY OF THE EFFECT OF CARBOCROMEN ON THE ISCHEMIC
MYOCARDIUM -U-
AUTHOR-(C4)-DZHAVAKHISHVILI, N.A., KOBALADZE, S.G., GIBKADZE, T.A.,
TSAGARELI, Z.G.
COUNTRY OF INFO--USSR
SOURCE--ARZHEIM., FERSCH. 1970, 20(3A), 440-1.
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MYOCARDIUM, DRUG, ARTERY, CARDIOVASCULAR DRUG, DRUG EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/F02 STEP NO--GY/0000/70/020/003/0440/0441
CIRC ACCESSION NO--AP0140632
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0140632

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN DOGS WITH EXPTL. CARDIAC
INFARCTION PRODUCED BY LIGATION OF THE ANTERIOR DESCENDING CORONARY
ARTERY, CARBOCROMEN ENHANCED VASCULARIZATION, MAINTAINED INTACT MUSCLE
FIBERS, INCREASED RETROGRADE BLOOD FLOW AND LYMPH DRAINAGE, AND RESTORED
VASCULAR PERMEABILITY IN THE INFARCTED AREA. FACILITY: A. N.
NATISHVILI INST. EXPTL. MORPHOL., TBILISI, USSR.

UNCLASSIFIED

USSR

UDC 537.311.33.546.289

GORELIK, S.S., KIREYEV, P.S., KOBAL'CHUK, L.V.

"Investigation Of The Effect Of The Nature Of Dislocation On The Energy Structure And Radiative Recombination Of Germanium"

V sb. Materialy Vses. soveshchaniya po defektam struktury v poluprovodn. 1969. Ch. 2 (Materials Of The All-Union Conference On Defects Of The Structure In Semiconductors. 1969, Part 2--Collection Of Works), Novosibirsk, 1970, pp 155-172 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B21)

Translation: Specimens were investigated of Ge doped with Sb with an electron concentration $2.4 \times 10^{15} \text{ cm}^{-3}$ with dislocations of various natures. The non-dislocated specimens were deformed in a vacuum with a pressure of 10^{-4} mm of mercury at 550°C by bending, and at 770° by twisting. Radiation was excited by gating of square pulses. The spectral composition of the radiation was analyzed by the IKS-12 monochromator and was recorded by a photoconductor cell, the signal from which was recorded by the EPP-092M. Injection of unbalanced charge carriers was made through a clamped contact. The investigation was conducted in the temperature range of $90\text{--}300^\circ \text{K}$. It is established that on the whole the presence of dislocations reduces the probability of a channel for radiative recombination. The nature of the dislocations influences the temperature dependence of a natural radiative recombination. 18 ref. V.B.

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USSR

UDC 536.423

RYBCHTSNSKAYA, G. B., KOBALOV, S. A.

"The Influence of the Transitional Boiling Mode on Propagation of Temperature Pulsations in a Rod"

Teplofizika Vysokikh Temperatur, Vol 9, No 6, 1971, p. 1226-1229.

Abstract: The problem is formulated of the propagation of temperature pulsations along a heat-conducting rod, on the surface of which a transitional boiling mode of a liquid is maintained, when there is a source of harmonic temperature oscillations at the free end and heat is applied to the root. The problem is reduced to determination of the dependence of the pulsation component in surface temperature on time and coordinates. It is demonstrated that the amplitude of the oscillations, due to the peculiarities of heat transfer in the transient mode, can increase with decreasing distance from the root of the rod with a sufficiently high value of the constant characterizing the transitional boiling mode.

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USSR

UDC: 550.838

LEBEDEV, N. N., GRIGOR'YEV, V. M., KLOCHEK, N. V., ~~KORAIKOV, N. I.~~, Siberian Institute of Terrestrial Magnetism, the Ionosphere and Propagation of Radio Waves, Siberian Department of the Academy of Sciences of the USSR

"A Method of Measuring Magnetic Field Strength"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 13, May 72, Author's Certificate No 335652, Division G, filed 17 Aug 70, published 11 Apr 72, p 196

Translation: This Author's Certificate introduces a method of measuring magnetic field strength in accordance with Zeeman splitting of a spectral line. As a distinguishing feature of the patent, precision is improved by converting the left-hand and right-hand circularly polarized components of Zeeman splitting to linearly polarized components, spatially modulating the relative position of the components in the direction of dispersion, and measuring the oscillations of the light flux which are proportional to magnetic field strength.

1/1

USSR

UDC: 574.94

MONAKHOVA, T. Ye., PROSKURNINA, N. F., TOLKACHEV, O. N., KOBANOV, V. S.,
PEREL'SON, M. Ye., All Union Scientific Research Institute of Medicinal
Plants

"Alkaloids of *Sophora Alopecuroides*. 3- α -Hydroxysophoridine"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 1, 1973, pp 59-64

Abstract: In a continuation of research on the alkaloids of *Sophora alopecuroides*, preparations were made from the aerial part of the plant in the fruit-bearing stage. The sum of the alkaloids obtained by the conventional dichloroethane method (2.5%) was divided into fractions of strong and weak bases. The following alkaloids were distinguished in the fraction of weak bases by extraction with various solvents combined with aluminum oxide chromatography: sophoridine, cytisine and three bases -- $C_{13}H_{18}N_2O_2$ (III), $C_{15}H_{24}N_2O_2$ (IV), and $C_{15}H_{24}N_2O_2$ (VI). The fraction of strong bases yielded sophoridine, cytisine and baptifoline (V). This is the first time that the alkaloids cytisine and baptifoline have been isolated from this plant. Infrared and mass spectroscopy suggest the structure of 3 α -hydroxysophoridine for base IV.

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1/2 027 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THERMAL PROCESSES STUDIED DURING THE QUENCHING OF STEEL -U-

AUTHOR--(02)--FEDOROV, V.I., KOBASKO, N.I. *K*

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (1), 66-9

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STEEL QUENCHING, THERMAL PROCESS, HEAT TRANSFER COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1988/1277

STEP NO--UR/0129/70/000/001/0066/0069

CIRC ACCESSION NO--AP0106058

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--02JCY70

CIRC ACCESSION NO--AP0106058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF STUDIES OF DIFFERENT
AUTHORS ON THERMAL PROCESS OCCURRING DURING THE QUENCHING OF STEEL ARE
ANALYZED AND DISCUSSED. THE GENERALIZED BIO CRITERION FOR DETN. OF THE
QUENCHING CONDITIONS DOES NOT DEPEND ON THE SHAPE AND DIMENSIONS OF THE
QUENCHED SPECIMENS. A SIMPLE EXPRESSION IS SUGGESTED FOR CALCN. OF THE
EFFECTIVE HEAT TRANSFER COEFF. AS A FUNCTION OF THE SHAPE, DIMENSIONS,
PHYS. PROPERTIES OF THE MATERIAL, AND CHARACTERISTICS OF THE COOLING
MEDIUM. AN EMPIRICAL EXPRESSION SUGGESTED BY FRENCH IS VALID FOR THE
SELF REGULATING THERMAL PROCESSES ONLY, SINCE THESE DO NOT OCCUR IF THE
CERTAIN MAX. AND MIN. DIMENSIONS OF THE SPECIMENS ARE EXCEEDED.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

2/2 015

CIRC ACCESSION NO--AP0106063

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH THE AIM OF DECREASING THE POSSIBILITY OF FORMING QUENCHING CRACKS AND SHRINKAGE, THE SAME TEMP. OF THE ONSET OF MARTENSITIC TRANSFORMATION, OR A TEMP. CLOSE TO IT, CAN BE RETAINED BY THE TEMP. OF THE FLUIDIZED BED IN THE PROCESS OF INTENSIVE COOLING OF STEELS IN LIQ. COLD MEDIUMS SUCH AS WATER, AQ. NaOH SOLNS., AQ. CaCl₂ SUB2 SOLNS., OR OIL. TEMP. OF THE COOLING LIQS. CAN BE INCREASED BY AN INCREASE IN PRESSURE. EVEN A SMALL INCREASE IN TEMP. OF THE FLUIDIZING BED SUBSTANTIALLY AFFECTS THE FORMATION OF QUENCHING CRACKS.

UNCLASSIFIED

USSR

UDC 611.735.015

K
KOBASKO, N. I., Institute of Technical Thermophysics, Academy of Sciences USSR:

"Formation of Cracks During Steel Hardening"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, 1977, pp 5-6

Abstract: It is established that for certain steels there is a definite rate of quenching in the martensite interval at which there is a maximum probability of the formation of hardening cracks. A change in the rate of quenching increases the probability of crack formation. Specimens of 45, 40Kh, and 06 steel were used in the investigation.

1/1

USSR

UDC 621.165:533.64

DEYCH, M. Ye., ~~KOBAZEV, A. V.~~ and DAKHNOVICH, A. A.

"Experimental Investigation of Supersonic Active Cascades With Different Relative Height"

Tr. Mosk. Energ. In-ta (Works of the Moscow Power Engineering Institute), No 99, 1972, pp 9-14 (from Referativnyy Zhurnal, Turbostroyeniye, No 5, 1972, Abstract No 5.49.26)

Translation: An investigation was made of the influence of end phenomena upon energy losses in active cascades within the Mach number range from 0.9 to 1.75 and with change of the relative height l/b from 0.43 to 1.30. The principal aim of the work was to determine the influence of the Mach number of a supersonic stream upon the intensity of the secondary flows and the linking of the end zones, as well as to investigate the region of small relative heights, in which the linear relationship of the loss coefficient to the value of b/l is infringed. 3 figures. 3 references.

1/1

USSR

UDC 629.12-52.019.3

GUBINSKIY, A. I., KOBZEV, V. V., GRECHKO, YU. P.

"Study of the Availability of Maritime Automated Control Systems"

Tr. TsNII mor. flota (Works of the Central Scientific Research Institute of the Maritime Fleet), 1971, vyp. 146, pp 3-10 (from RZh--Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 4, Apr 72, Abstract No 44634)

Translation: The quantitative reliability criterion -- availability factor -- was obtained for nonredundant, repairable maritime automatic control systems with various functions performed in them by man. The reliability of the complex was investigated as a function of the degree of automation of the control system and the type of human activity in it. The expedient means of improving the reliability of the complex are demonstrated. There are 2 illustrations and a 2-entry bibliography.

1/1

USSR

UDC 621.396.4:621.396.669.8

ROMANOV, I.M., NEZHEVEDINOV, T.K., KOBOCHIKOV, A.V., NUGMANOV, I.S.

"Introduction To The Theory Of Designing Asynchronous Pulse Radio Systems"

Vvedeniye v teoriyu proyektirovaniya asinkhronnykh impul'snykh radiosistem
(cf. English above), Moscow, "Sov.radio," 1971. 193 pp, ill. 54 k. (from
RZh: Radiotekhnika, No 2, Feb 1972, Abstract 2A203K)

Translation: From the position of system engineering the book considers a number of basic problems of the initial designing of asynchronous pulse radio systems (APRS) in which several nonsynchronized transmitters transmit information to a common receiving center. In the process, problems are considered connected with a specific efficiency of the APRS, and some interrelations of the probability characteristics of the system. Considerable attention is given to problems of the use of methods of the theory of mass maintenance and to evaluations of the noise immunity and the traffic capacity of the APRS on exposure to noise which imitates the applicable complex signals. Some methods are considered of increasing the efficiency and noise immunity of the APRS by additional processing of information by special logical devices and use of information and structural adaptations in these systems. The books is intended

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USSR

ROMANOV, I. M. et al, Vvedeniy v teoriyu proyektirovaniya asinkhronnykh impul'snykh radiosistem, Moscow, "Sov. radio," 1971, 193 pp, ill. 54 k.

for specialists occupied with problems of designing complex radio systems and also for graduate students and students of advanced courses of higher educational institutions for corresponding specialities. 49 ill. 9 tab. 79 ref. Annotation.

2/2

15

USSR

UDC 519.24

LADOKHIN, V. I., KOBCHIKOV, A. V., NEZHMETDINOV, T. K., PANKOVETS, V. V.,
IYANYCHEV, Yu. N.

"Experimental Determination of the Correlation Function of Processes of Changing Intensity in Adaptive Information Processing Systems"

Priyem i Obrabotka Inform. v Slozhn. Inform. Sistemakh [Reception and Processing of Information in Complex Information Systems -- Collection of Works], No 2, Kazan', Kazan University Press, 1970, pp 141-146, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V202 by Yu. Shevchenko).

Translation: The problem of determination of the sampling estimate of the correlation function in adaptive information processing systems (ADIPS) on the basis of observation data is studied. The Cauchy-Bunyakovskiy inequality is used to write an upper estimate for the dispersion of the estimate of the correlation function. In conclusion, the authors present examples of practical problems which can be solved using the results they produce.

Abstractors Note. The replacement of the actual processes occurring in ADIPS with stable Gaussian processes in this work requires foundation.

USSR

UDC 518.5.681.3.06

KGBCHIKOV, A. V., MULEYEV, Ya. F., OZHIGANOV, L. I.

"Two Realizations of the Tabular-analytic Method of Calculation of Functions"

Tr. Kazansk. Aviats. In-ta [Works of Kazan' Aviation Institute], No. 104, 1970, pp 59-63 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V674 by V. Zhdanov).

Translation: The use of a tabular-analytic method for calculation of a binary logarithm and trigonometric functions is studied, based on the representation of the function $y=f(x)$ as $y=\phi(x)+\delta(x)$, where $p(x)$ is an approximating function, rather easy to calculate or produce with a circuit, while $\delta(x)$ is a correcting function stored in a memory unit. For the function $y=\log_2 x$, $0 \leq x \leq 1$, we can select $\phi(x)$ as

$$\phi(m^*) = p - 1 + m^*; \quad x = m^{*p},$$

where $m^*=2m-1$, while $\delta(m^*)=\log_2(1+m^*)-m^*$. A block diagram of the arithmetic unit producing this algorithm is presented, its operation studied and an estimate given of the accuracy and speed produced in multiplication and division. For the trigonometric functions

USSR

UDC 518.5.681.3.06

KOBCHIKOV, A. V., KULEYEV, Ya. F., OZHIGANOV, L. I., Tr. Kazansk. Aviats. In-ta,
No. 104, 1970, pp 59-63.

$$y = \sin \frac{\pi}{2} x, x = \frac{2}{\pi} \arcsin y; 0 < x < 1.$$

the approximating function can be selected as $\phi(x)=x$ with correction function
 $\delta(x) = \sin \frac{\pi}{2} x - x$, the maximum value of which is $\delta_{\max}=0.215$, allowing the volume of
tables to be reduced in comparison with the volume of tables of complete values
of functions by about 4.6 times.

2/2

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USSR

UDC 681.3.001:518.5

KORCHIKOV, A. V., KULEYEV, KH. F., OZHIGANOV, L. I.

"Two Implementations of the Tabular-Analytical Method of Calculating Functions"

Tr. Kazan. aviats. in-ta (Works of Kazan' Aviation Institute), 1970, vyp. 104, pp 59-63 (from RZh-Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 2, Feb 71, Abstract No 2835)

Translation: The possibilities of using the method of tabular-analytical representation of functions in digital computers are discussed. Here, the function $y = f(x)$ is represented in the form $y = \phi(x) + \delta(x)$: where $\phi(x)$ is an approximating function sufficiently simply calculatable or obtainable schematically, and $\delta(x)$ is the correction function stored in the long-term memory in the form of correction tables. There are 2 illustrations, 1 table, and a 3-entry bibliography.

1/1

USSR

UDC 621.318.1-419.538.22

BEREZHNOY, Ye. F., and KOBELEV, V. V., Moscow

"Magnetostatic Interactions in Multilayer Magnetic Film Structures"

Moscow, Avtomatika i Telemekhanika, No 8, Aug 71, pp 168-176

Abstract: A method is proposed for analyzing magnetostatic interactions in multiple-layer magnetic film elements when the controlling fields act parallel to the unfavorable axis of magnetization. The solution is found by an operator method based on the bilateral Laplace transform. The properties of single-layer and two-layer films on a dielectric and on a conducting substrate are compared. It is shown that demagnetizing fields can be reduced by a considerable factor by proper selection of the thickness of magnetic and dielectric layers.

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AA0051848- KOBEEV Yum UR 0482 11

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

239597 INDUCTIVE LEVEL METER where a float can move freely along the inductive coils indicating its position corresponding to the measured level. The float has been improved, it has two flanges which make it possible to obtain a parallel reading from two independent coils.

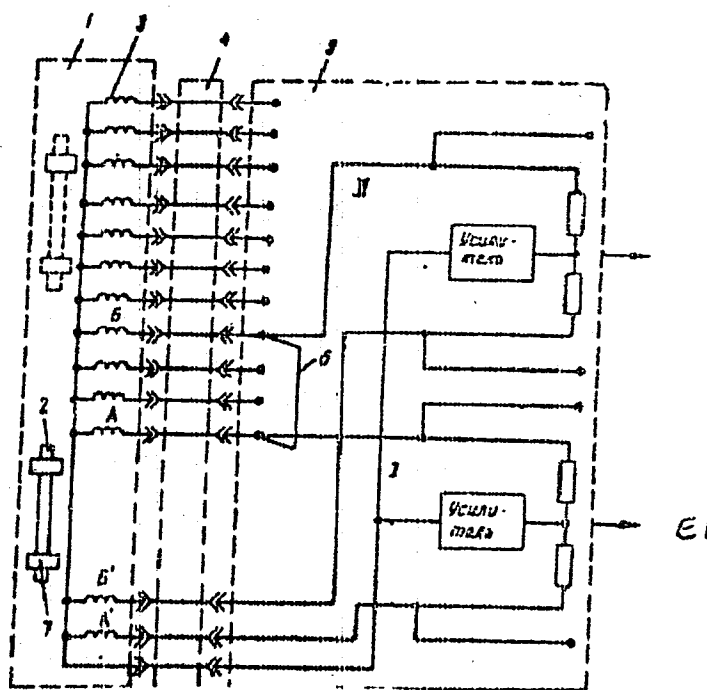
12.12.66 as 1119046/26-10. A.S. ABRAMOV et al.
(28.7.69) Bul 11/18.3.69. Class 42e. Int.Cl.G 01f.

AUTHORS: Abramov, A. S.; Zotov, S. V.; Maslov, G. S.; Vargin, B. A.;
Shorin, N. I.; Kornyushin, P. M.; Mirskov, B. I.; Chistyakov, N. N.;
Mosyakov, V. A.; Kozlovskiy, G. V.; Chichigin, I. B.; Batov, V. A.;
Golovachev, V. T.; Lyakhterov, M. N.; Kobelev, Yu. M.

1/2

19820276 1

AA0051848



19820277

USSR

UDC: 532.529

ROSENTHAL', O.M., GANEBNYKH, N.V., CHETIN, F.E. and
KOBALOVA, R.M.

"High-Dispersion Water Aerosol in Electrostatic Field"

Odessa, 11-ya Vses. Konf. po Vopr. Ispareniya, Goreniya i Gaz.
Dinamiki Dispersn. Sistem, 1972 (11-th All-Union Conference on Problems
of Evaporation, Combustion and Gas Dynamics of Dispersion Systems, 1972),
1972, p 15 (from Referativnyy Zhurnal-Mekhanika, 1973, Abstract No 2B1216)

Translation: Calculations were performed of deformations, oscillations and
decomposition of droplets in electrostatic fields as functions of degree of
particle dispersion. Analysis of elliptic deformations is based on an equation
including Negibbs thermodynamic corrections. Extreme dependence of
surface variation on particle volume in constant field was obtained. It is
shown that droplets of $\sim 10^{-4}$ cm radius have the highest stability with
respect to external actions. This result agrees with the actually observed
size of droplets of water aerosol in atmosphere and cloud chambers and makes
it possible to extrapolate the available measurements of the range of droplet
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USSR

ROSENTHAL', O. M., et al., 11-ya Vses. Konf. po Vopr Ispareniya, Goreniya i Gaz. Dinamiki Dispersn. Sistem, 1972 p 15

size to the field of little known high-dispersion aerosol. It is established that Negibbs thermodynamic effects increase sharply the sensitivity of small particles to external electrostatic fields.

2/2

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USSR

UDC 632.952.02 --

MARKH, A. T., FEL'DMAN, A. L., and KOBELEVA, S. M., Odessa Technological Institute of the Food Industry imeni M. V. Lomonosov

"The Influence of Tetramethylthiuram Disulfide on the Metabolism and Biosynthesis of Sulfur-Containing Compounds in the Tissues of Potato Tubers"

Moscow, Khimiya v Sel'skom Khozyaystva, Vol 10, No 6, 1972, pp 35-37

Abstract: A laboratory experiment was conducted with Odessa type potatoes on a Knopp culture solution to which had been added .5 microcuries of ^{35}S with a specific activity of 414242 counts/minute. Exposition was for 3 and 6 days. Sulfur-containing compounds were separated with one-dimensional descending chromatography method. The specific activity of the sulfur (a) of the investigated compounds is determined by the exchange rate and the synthesis of the substance during tagging. The rate of synthesis (K) was calculated by the formula:

$$K = \frac{^{35}\text{S}}{S} = \frac{a}{a_0 - a}$$

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MARKH, A. T., et al., Khimiya v Sel'skom Khozyaystva, Vol 10, No 6, 1972, pp 35-37

where ^{35}S is the amount of sulfur included in the investigated compound, in grams; S is the amount of sulfur in the compound up to the time of tagging; a_0 is the specific activity of the sulfur ^{35}S in the nutrient culture, in counts/min. per 1 g. The standard deviation of the experiment was calculated by the formula $m = 0.67 \sqrt{N}$. Correlation of the fractions derived leads to the conclusion that sulfur in $\text{Na}_2^{35}\text{SO}_4$ first enters the mineral part, witnessed by its higher specific activity, then into the organic acid-soluble part, and finally into the albumin part. The variants with TMTD underwent a quicker distribution of the sulfur fractions. Also, the organic acid-soluble and albumin parts gained sulphur at the expense of the mineral part. It was determined that TMTD speeded the process of sulfate restoration and the intensity of biosynthesis of organic biologically active sulfur-containing compounds. TMTD also preserved thiamin from oxidization.

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USSR

UDC 537.29

SMOLENTSEV, V. P., KHAYRUTDINOV, A. K., OLEYNICHENKO, T. P., and KOBELEVA, T. K., Kazan

"Metallographic Investigations of the Surface Layer of Alloys After Dimensional Electrochemical Treatment"

Moscow, Fizika i Khimiya Obrabotki Metallov, No 1, Jan-Feb 71, pp 135-137

Abstract: Results are presented on metallographic investigations of surface layers of hardened 40KhNMA and OKhN3MFA steels and AVT1 and VTZ-1 alloys after dimensional electrochemical treatment within the whole range of current densities in electrolytes used in the production of channels in long-measuring parts. Recommendations for applying dimensional electrochemical treatment and for the selection of allowances for the after treatment are given. The 40KhNMA and OKhN3MFA steels, hardened to HRC 35-37, and the AVT1 aluminum alloy showed no signs of corrosion by the electrochemical treatment, but the VTZ-1 titanium alloy corroded along the grain boundaries up to a depth of 0.03 mm.

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1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EFFECT OF TMTD ON THE NUTRITIVE QUALITY OF POTATOES, PEPPERS, AND
EGGPLANT -U-
AUTHOR--(02)-FELDMAN, A.L., KOBELOVA, S.M.
COUNTRY OF INFO--USSR
SOURCE--KHIM. SEL. KHOZ. 1970, 8(3), 182-3
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PESTICIDE, ORGANIC SULFUR COMPOUND, ORGANIC POLYSULFIDE,
VEGETABLE, FOOD ANALYSIS, THIAMINE, RIBOFLAVIN, AMINO ACID, SULFUR
COMPOUND, ASCORBIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/0562 STEP NO--UR/0394/70/008/003/0182/0183
CIRC ACCESSION NO--AP0131135

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0131135
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TMTD (TETRAMETHYLTHIURAM
DISULFIDE), USED FOR THE PROTECTION OF SUMMER PLANTED POTATOES, IS NOT
ACCUMULATED IN THE HARVEST OF THE NEW TUBERS. ANAL. OF PEPPER AND
EGGPLANT FRUITS GROWN IN THE PRESENCE OF TMTD SHOWED THAT THE CONTENT OF
VITAMINS C, B SUB1, B SUB2, AND PROTEIN WAS HIGHER WHILE THAT OF AMINO
ACIDS WAS LOWER THAN THE CONTROL. THE TOTAL AMT. OF S IN FRUITS WAS NOT
INFLUENCED BY TMTD, BUT AN INCREASE IN MINERAL S CONTENT TOGETHER WITH
DECREASE OF S IN THE ETHER AL. FRACTION WAS FOUND. FACILITY:
ODESS. TEKHNDL. INST. IM. LOMONOSOVA, ODESSA, USSR.

UNCLASSIFIED

1/2 037 UNCLASSIFIED PROCESSING DATE--11SE
TITLE--RESULTS OF TREATMENT OF ACUTE PANCREATITIS -U-
AUTHOR--DOROGAN, D.A., KOBELYATSKIY, I.T. K
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 37-39
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MEDICAL EXAMINATION, PAIN, BODY TEMPERATURE, LEUKOCYTOSIS,
HYPERTENSION, LIVER FUNCTION, KIDNEY FUNCTION, NECROSIS, PANCREATITIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/0952

STEP NO--UR/0475/70/000/003/0037/0039

CIRC ACCESSION NO--AP0102891

UNCLASSIFIED

2/2 037

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102891

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MAIN CLINICO LABORATORY DATA ARE PRESENTED GAINED FROM A STUDY OF 165 PATIENTS WITH ACUTE PANCREATITIS. THE PATIENTS SHOWED; EPIGASTRAL PAIN (IN ALL PATIENTS), NORMAL TEMPERATURE (62.4PERCENT), LEUCOCYTOSIS FROM 10,000 TO 18,000 (64.7PERCENT), TACHYCARDIA (109 PATIENTS), HYPOTENSION (91 PATIENTS), AGROCYANOSIS (23 PATIENTS), ELEVATED URINARY DIATASE (81.9PERCENT), HYPERGLYCEMIA (41.8PERCENT); SIGNIFICANT LIVER PATHOLOGY, RENAL FUNCTION DISORDERS. 151 PATIENTS WERE TREATED MEDICALLY AND ALL RECOVERED. OF THE 14 SURGICALLY TREATED PATIENTS THREE DIED. THEY SHOWED HEMMORHAGIC NECROSIS OF THE PANCREAS.

UNCLASSIFIED

KOBETS, G. F.

ROLE OF PECULIARITIES IN EXTERNAL STRUCTURE IN THE HYDRODYNAMICS OF HIGH-SPEED FISH

(Article by G. F. Kobets and M. L. Komarov, Novosibirsk: Klov, Blonkie, Zvezda, No 3, 1971, 120-vo "Naukova Dumka," pp 101-103)

SPAS 55711
15 May 72

There is now a marked increase in interest in studies of the hydrodynamic characteristics of marine animals and the volume of information has also increased correspondingly. Many researchers are attempting to explain the so-called grey paradox, understood as the noncorrespondence between the muscular capabilities of a marine animal and the velocity which it develops. Unfortunately, most of the proposed hypotheses are very poorly supported by theoretical or experimental data and some of them contradict the known facts of hydromechanics.

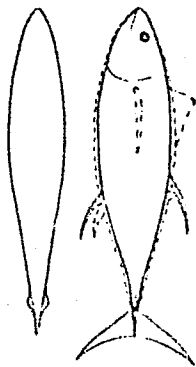


Fig. 1. Configuration of body of tunas: Thunnus albacore Lowe (solid line); Thunnus obesus Lowe (dashed line).

We will examine the soundness only of some hypotheses pertaining to tunas, sharks and representatives of Xiphidae (swordfish, marlin, sailfin).

KOBETS, G. P.

ORGANIZATION OF ADVANCED TRAINING FOR PHYSICIANS AND PARAMEDICAL PERSONNEL
IN DONETSKAYA OBLAST

UDC: 614.23-614.353.51:658.384.3(477.62)

[Article by G. P. Kobets, head of Donetskye Oblast Health Department, N. I. Shchepukhin, deputy head of Donetskye Oblast Health Department, N. I. Shchepukhin, head of the organizational and methodological office, Moscow, Sovetskaya Zdravookhraneniye, November, No 9, 1972, submitted 6 April 1972, pp 50-54]

Further improvement of medical care for the people and safeguarding their health, systematic extension of the period of active employment of Soviet people, depend, in many respects, on the competence of public health workers. They solve problems that require profound special knowledge, keeping regularly informed on modern advances in medicine and practice, a high degree of awareness, and a consistent attitude toward work.

In our country, the allocations for public health are increasing every year; its material base is expanding; the quantity of medical specialists is growing; and they should be used as to best meet the demands of working people with regard to accessible and highly qualified medical care. This obligates the administrators of public health organizations and institutions to be properly trained in the field of management, scientific planning, and economics of public health, and to have high personal standards.

There are more than 12,290 physicians and 44,000 paramedical personnel in Donetskye Oblast. It is a complex task to advance their qualifications and it cannot be fulfilled by referring specific categories of individuals to courses (with absence from work), to institutions or faculties for advanced training of physicians. For this reason, we are searching for new forms of advanced training for medical using local bases, and we believe that our experience merits attention.

Advanced training of public health organizers in the oblast, their attendance in classes of modern management methods are offered in three independent groups. A two-year school for public health organizers was established as far back as 1968 for the first group, which included all the

1485 57351

27 Oct 72

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Polymers and Polymerization

USSR

UDC 678.06-419.8:678.046.27.01:53

TROSTYANSKAYA, YE. B., and KOBETS, L. P.

"Possibilities for Improving the Strength of Graphite Plastics"

Moscow, Plasticheskiye Massy, No 1, Jan 70, pp 53-56

Abstract: The authors studied the feasibility of improving the strength of graphite plastics by appropriate selection of the binder or manufacturing techniques. The investigation was based on optical, radiographic, analytical and other studies of graphitized grade TG-2 fiber. It was found that satisfactory wetting of graphitized fiber takes place only in an alcohol solution of phenol-formaldehyde resin. However, it was experimentally determined that alcohol and acetone should not be used as solvents when soaking graphitized fibers in resin solutions, and also that cresol-formaldehyde resins are preferable to phenol-formaldehyde resins for this purpose. The low strength of graphitized TG-2 fiber is apparently due to disorientation of crystallites, open porosity, and a considerable number of pores and cracks in the surface layer. The average size of these surface defects is less than the size of the oligomer molecules used in the resins as binders. The fiber surface has low energy and is

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USSR

TROSTYANSKAYA, YE. B., et al., *Plasticheskiye Massy*, No 1, Jan 70, pp 53-56

poorly wetted by most liquids. It was found that the open pores of the fiber can be filled with a monomer such as a mixture of para- and meta-divinylbenzenes. This polymer wets the fiber and polymerizes with it to form an insoluble polymer. This treatment improves the strength and elasticity of the graphitized fiber. After polymerization, the treated fibers were impregnated with alcohol solutions of phenol-formaldehyde and organo-silicon resins. Graphite plastic specimens were then pressed from the fibers with appropriate heat treatment. The density, tensile strength and modulus of elasticity are tabulated for impregnated specimens with and without polymerization. The greatest improvement in all indices was obtained with 7,7% divinylbenzene and impregnation with phenolformaldehyde resin.

2/2

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Acc. Nr.

APD 045163

Abstracting Service:
CHEMICAL ABST.

5-70

Ref. Code

UR 0191

91079h Increasing the strength of carbon fiber composites. Trost'yanskaya, E. B.; Kobets, L. P. (USSR). *Plast. Massy* 1970, (1), 53-6 (Russ). TG-2 carbon fibers (I) were studied by x-ray anal. and optical methods in order to improve the strength of C fiber composites (II). Potentiometric titrns., x-ray anal., and optical methods indicated that the low strength of I was due not only to deorientation of crystallites and closed porosity, but also to considerable cracking at the surface. Thus, I were treated with a mixt. of *m*- and *p*-divinylbenzene (III) (contg. 2% peroxide) so that a thin layer of poly(divinylbenzene) be formed on I. The tensile strength and elastic modulus markedly increased after the polymn. of III. The modified I were impregnated with BSL phenol-HCHO resin and K-9 organosilicon resin, the solvent was evapd., and II were molded 0.5-3.5 hr at 155-200°. CKJR

REEL/FRAME

19780063

USSR

UDC 624:539.4

KOBIDZE, G. N.

"Seismic Inertial Loading on a Spatially Acting Industrial Building by Seismogram and Velocigram, Acquired by Integration of the Accelerogram of a Destructive Earthquake"

Kiev, Seysmichnost', seysmich. opasnost' Kryma i seysmostoykost' str-ba (Seismicity, Seismic Danger of the Crimea and the Seismic Stability of Buildings, Collection of Works), Nauk dumka, 1972, pp 169-174 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V1103)

Translation: A method for and results of calculating one-story industrial buildings under seismic action with a calculation of the three dimensional pattern of their deformation and also the differentiability of the seismic motion of the ground under the building are presented. As initial information using a computer the accelerogram of the ground seismic motion during a destructive earthquake, and also the velocigram and seismogram, obtained by numerical integration of the same accelerogram are used. A comparison of the results using the method proposed with a calculation of an industrial building without calculating expansion and spatiality is given. (Author's abstract)

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1/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--TECTONIC CLAYS FROM LEAD ZINC DEPOSITS OF THE SAVON ORE FIELD -U-
AUTHOR--(02)-KOBILEV, G.A., NYRKOV, A.A. *K*
COUNTRY OF INFO--USSR
SOURCE--GEOL. RUD. MESTOROZHD. 1970, 12(1), 105-10
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--LEAD, ZINC, MINERAL DEPOSIT, IRON OXIDE, SULFIDE, MANGANESE,
GEOGRAPHIC LOCATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0183 STEP NO--UR/0306/70/012/001/0105/0110
CIRC ACCESSION NO--AP0129439
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129439

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHEM. AND MINERALOGICAL COMPNS. OF BOTH FINE AND COARSE FRACTIONS OF TECTONIC CLAYS WERE DETD. THE MAIN PIGMENTS FOUND IN THE CLAYS WERE ANTHRAXOLITE, HYDRATED FE OXIDES, LEUCOXENE, SULFIDES, AND MN MINERALS. FACILITY: NOVOCHERKASSK. POLITEKH. INST. IM. ORDZHONIKIDZE, NOVOCHERKASSK, USSR.

UNCLASSIFIED

USSR

UDC 539.23:678.745:537.226

AYVAZOV, V. YA., KOBKA, V. G., PEROVA, L. V.

"Obtaining Thin Polymer Films and Studying their Dielectric Properties"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 5, 1971, pp 39-42

Abstract: A study was made of the process of obtaining polymer films on an insulated substrate placed in the interelectrode space, the electrophysical properties of these films and the parameters of thin-film capacitors based on them. The procedure for obtaining the thin polymer films in an AC glow discharge is described. Data are presented showing the effect of the vapor pressure of the initial monomer (hexamethyldisiloxane) and the discharge current density on the stability of the dielectric properties of the films. All the basic electric parameters of thin-film capacitors with a polymer dielectric measured in a broad temperature and frequency range are presented. A table is given with the dielectric constant ϵ , $\tan \delta$ at a frequency of 1 kilohertz, the leakage resistance for a DC voltage of 10 volts, the breakdown voltage V for capacitors with an electrode area of 0.1 cm^2 . These parameters are sufficiently high for the thin-film capacitors with a polymer dielectric to operate under the most rigid temperature conditions. The described polymer films can be used successfully in microelectronics to obtain high-frequency film capacitors and insulating layers.

1/1

USSR

UDC 621.793.12

AYVAZOV, V. Ya., KOBKA, V. G. and PEROVA, L. V.

"Production of Thin Polymer Films and Study of Their Dielectric Properties"

Poluprovodn. tekhn. i mikroelektronika. Resp. mezhved. sb. (Semiconductor Technics and Microelectronics. Republic Interdepartmental Collection), 1971, Issue 5, pp 39-42 (from RZh-Elektronika i yeye primeneniye, No 9, September 1971, Abstract No 9A198)

Translation: A method is described for producing thin polymer films in an a-c glow discharge. The effect is studied of the pressure of vapors of an initial monomer (hexamethyldisiloksan) and the density of the current discharge on the stability of the dielectric properties of the film. All the basic electrical parameters are provided for thin film capacitors with a polymer dielectric measured in a wide range of temperatures and frequencies. 5 ref. Summary.

1/1

- 110 -

Organ and Tissue Transplantation

4

USSR

UDC: 616.12-089.843-089.168

FAL'KOVSKIY, G. E., KAZAKOV, E. N., YARLYKOVA, Ye. I., ASTRAKHANTSSEVA, G. I.,
ALEKSEYEVA, L. A., KOBKOVA, I. D., SOKOLOV, M. V., GALANKINA, I. Ye., BOL'SHUKHINA,
L. A., and GUDKOVA, R. G., Institute of Cardiovascular Surgery imeni A. N. Bakulev,
Academy of Medical Sciences USSR, Moscow

"The fate of an Heterotopic Heart Allotransplant"

Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, No 6, Nov/Dec 70, pp 3-12

Abstract: Donor hearts transplanted to the iliac arteries of recipient dogs survived up to 16 days. The causes of cessation of transplant function during the first 48 hours were surgical complications (death of the recipient from the anesthetic, hemorrhages from the sutures, thrombosis). In the absence of such complications, the transplants continued to function 3 to 12 days average, (4.75 days) when immunodepressants were not used, and 3 to 8 days (average, 6.16 days) when they were. Cardiac arrest was preceded by arrhythmias, a decrease in voltage of the ventricular complex, and increase in lymphocytes in the peripheral blood following leukopenia. Immunomorphological changes in the recipient's lymphatic system preceded the morphological signs of rejection in the transplant (pronounced lymphoid-histiocyte infiltration, changes in the arteris, and metabolic disturbances in the myocardium).

1/1

USSR

UDC 621.395.347

KOBLENTS, Ya. G., GRUSEVICH, S. I., KONOVSIIY, A. G., and
GORYACHEVA, L. I.

"Fast-Acting Selective Mixers"

Moscow, Elektrosvyaz', No. 7, 1971, pp 30-35

Abstract: The mixers discussed in this article refer to the circuits used in automatic telephone lines of the decade type. They can be made to operate speedily through the use of quasi-electronic techniques, semiconductor devices and hercons (hermetically sealed contacts). With such instrumentation, the lines are better utilized and there is little delay in establishing contacts. This article presents the basic technical data of such mixing circuits, indicates the connections and switching procedures, and explains their operation with the assistance of block and switching diagrams. Fast-acting selective mixer equipment has proved its worth under test conditions in the telephone lines between Leningrad and Moscow. It is asserted that, in addition to using fast-acting mixers, existing lines should be modified to improve the efficiency of individual operators' equipment. In the information center of the Leningrad lines, for example, two racks of the fast-acting mixer circuits have improved the uniformity of calls on the operators with a 10% increase in information supplied.

1/1

USSR

UDC: 621.318.435.3

GORYACHEV, N. P., KOBLENITS, Ya. G., MORSHAKOV, V. A., RABKIN, L. I.,
EPSHTEYN, B. Sh., YAKOVENKO, D. A.

"A Noncontact, Magnetically Controlled Diode"

V sb. Novyye beskontaktn. elektron. ustroystva. Ch. 1 (New Noncontact Electronic Devices--collection of works. Part 1), Moscow, 1970, pp 26-31 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 70, Abstract No 11A26)

Translation: The authors present the characteristics and describe some designs of ferroids whose principle of operation is analogous to that of a transformer with magnetization. A closed ferrod on a frame core made up of two L-shaped plates with a nonferromagnetic gap has low scatter of the output characteristics and high sensitivity. A ferrod designed on the basis of using a permanent magnet has inverse characteristics. A device with similar characteristics is a magnetically controlled diode designed around a standard ferrite bead with rectangular hysteresis loop located in the opening of a metallic magnetic circuit. Six illustrations, bibliography of four titles. Yu. Kh.

1/1

AA0051857

Soviet Inventions Illustrated, Section II Electrical, Derwent,

UR 0482

1/70

242238 PULSE CONTROLLED COMMUTATING COMPONENT
has two coils wound on the magnetic core.
The holding coil provides a big enough magnetic
field for supporting the making contacts. The
de-energising coil is also operated by a pulse.
Both coils have independent ampere-turns and
their on and off operation can be adjusted so
that the contacts make and brake without hesit-
ation. The component is applicable to the tele-
phony. 8.1.68. as 1208072/26-9. I.D.KOPTSEV
et al. (16.9.69.) Bul.15/25.4.69. Class 21a³.
Int.Cl. H04m.

AUTHORS: Koptsev, I. D.; Koblents, Ya. G.;
Konovskiy, A. G.

MT

1/1

4

19820292

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ASSESSMENT OF SOME ROENTGENOTOMOGRAPHIC SIGNS OF MITRAL STENOSIS
AND MITRAL INCOMPETENCE -U-
AUTHOR--(05)-PUTOV, N.V.; ~~KOBLENTSMISHKE, A.I.~~ GUDIMLEV KOVICH, V.N.,
ROZHKOV, A.S., POSEVIN, D.I.
COUNTRY OF INFO--USSR
SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 1, PP 26-32
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HEART DISEASE, HEART SURGERY, DIAGNOSTIC MEDICINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1999/0126 STEP NO--UR/0497/70/048/001/0026/0032
CIRC ACCESSION NO--AP0122392

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0122392

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN 100 PATIENTS SUBJECTED TO MITRAL COMMISSUROTOMY THE DEGREE OF STENOSIS OF THE LEFT ANTRIOVENTRICULAR ORIFICE AND MITRAL INCOMPETENCE WAS COMPARED WITH TOMOGRAPHIC SIZES OF THE LEFT BRANCH OF THE PULMONARY ARTERY AND LEFT ATRIUM. IT WAS FOUND THAT SIGNIFICANT INCREASE (OVER 10.5 CM) OF THE LEFT ATRIUM DOES NOT CONTRADICT THE DIAGNOSIS OF TIGHT MITRAL STENOSIS AND INSIGNIFICANT MITRAL INCOMPETENCE, BUT THE ABSENCE OF SUCH AN INCREASE TESTIFIES, AS A RULE, AGAINST IMPORTANT MITRAL INCOMPETENCE. A MARKED DILATATION OF THE PULMONARY ARTERY IS CHARACTERISTIC FOR TIGHT MITRAL STENOSIS. AN ABSENCE OF SUCH A DILATATION DOES NOT CONTRADICT THE DIAGNOSIS OF TIGHT MITRAL STENOSIS. THERE WAS REVEALED A DISTINCT RELATION IN CONJOINT EVALUATION OF THE SIZES OF THE LEFT ATRIUM AND PULMONARY ARTERY.

UNCLASSIFIED

USSR

UDC 629.7.036.3-55(088.8)

KONTOROVICH, B. M., KOBLIK, I. M., GUSAKOV, V. I., ZAKIROV, R. F.

"A Device for Controlling Fuel Supply"

Author Certificate USSR, Class 46 f, 8/01 (F 02 c), No 276644, claimed 7.10.68, published 12.03.71 (from Referativnyy Zhurnal, Aviatsionnyye i Raketnyye Dvigateli, No 11, Nov 71, Abstract No 11.34.69 F)

Translation: There is patented a device for controlling the fuel supply, for example in a gas-turbine engine, containing a pump controlled by an rpm regulator with a hydraulic retarder, a throttling cock, kinematically linked with a control lever and a valve for maintaining a constant differential at the throttling cock. The device is distinguished by the fact that with the aim of ensuring operation of the engine without surge over the entire range of regimes, in the high-pressure main line is installed a dosing needle with a supplementary hydraulic retarder for damping the relief of the rotations at regimes below the start of automatic operation of the regulator. The device is distinguished by the fact that with the aim of decreasing the stopping time of the engine, an annular flow-through channel is constructed on the throttling cock for connecting the piston cavity of the dosing needle to the main overflow line. 1 figure.

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AA0101179

KOBLIK L.M.

UR 0482

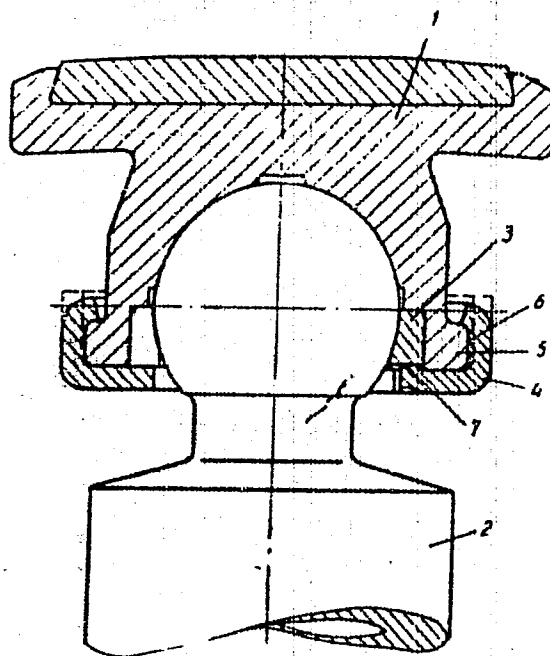
Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, 1-70

242606 PLUNGER e.g. for fuel pump with spherical head, carrying a footstep bearing in the neck of which is a bracing ring, differing in the bearing having a shoulder to which is fastened a horseshoe-shaped frame of plastic to hold the ring. The ring and shoulder may have shaped slots for the frame to be pressed in. This gives a more reliable fixing of the footstep bearing. Footstep bearing 1 is connected to plunger 2 by bracing ring 3, fixed by frame 4. The material of the wall of the frame is crimped around shoulder 5 on the footstep bearing and pressed into slots 6 and 7 on the endface surface of ring 3 and shoulder 5.

2.1.68 as 1207319/24-6. POLIANSKII A.F. et al. (10.9.69)
Bul 15/25.4.69. Class 46f, 59a. Int.Cl.F 02c, P 05b.

19850834

AA0101179



19850835

AA0101179

AUTHORS: Polyanskiy, A. F.; Kontorovich, B. M.; Koblik, L. M.;
Gusakov, V. I.; Tokarev, N. N.; Khlopin, A. N.; Borovik, S. A.

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19850836

Surgery

USSR

UDC 616.132+616.13]-89.28-07:616.151.5-07

PETROVSKIY, B. V., KNYAZEV, M. D., KOBLOV, L. F., STEPANOV, G. A., and SMIRNOVA, L. A., Scientific Research Institute of Clinical and Experimental Surgery, Ministry of Health USSR

"Hemostasis After Repair Operations on the Aorta and Major Arteries Using Electroconductive Prostheses"

Moscow, Kardiologiya, No 4, 1971, pp 9-14

Abstract: Vascular prostheses woven with silver threads were implanted in 30 patients with occlusion (due to atherosclerosis and endarterteritis) of the terminal portion of the aorta and iliac arteries or aneurysms of the aorta). A like number of patients with similar lesions received nonconducting terylene prostheses. Hypercoagulability was characteristic of both groups of patients before surgery because of high fibrinogen concentration, lowered fibrinolytic activity, increased antifibrinolysin activity, and slow blood flow. Postoperatively, none of the patients who received an electroconductive prosthesis required anticoagulant and fibrinolytic therapy, whereas most of those who received a terylene prosthesis showed signs of hypercoagulability, and several developed thrombosis despite the administration of anticoagulants.

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USSR

UDC 616-074:681.3

KOBLOV, L. F., KUKURUZA, E. N., and MARKOVA, A. M., Laboratory for Clinical Diagnosis, and Scientific Organization Division, Scientific Research Institute of Clinical and Experimental Surgery, Ministry of Health USSR

"Automation of Biochemical Tests and Computer Processing of the Results"

Moscow, Laboratornoye Delo, No 9, 1970, pp 525-529

Abstract: Since 1969 the authors have been studying data obtained by means of a Clinomak, an automated apparatus manufactured in Italy by Polimak. The device comprises a unit for measuring and storing blood, a photocolormeter, and a programming device. The results have been processed on a Soviet Nairi computer. The Clinomak is capable of determining cholesterol, glucose, blood bilirubin, protein fractions, and thymol turbidity. In 86 patients with diseases of the liver and bile duct, seven types of glycemic curves were distinguished (normal, original hypoglycemic, hepatic, pancreatic, ansthenic, diabetic, and adrenal insufficiency). Establishing the type of glycemic curve for each patient permitted rapid and accurate diagnosis of the disease. Currently under study are 267 patients with surgical diseases of the heart and blood vessels. The hemograms, thromboelastograms, and coagulograms are processed in the same manner as

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USSR

KOBLOV, L. F., et al., Laboratornoye Delo, No 9, 1970, pp 525-529

the glycemc curves. Efforts are being made to identify five types of hemo-grams (normal, anemic, inflammatory, allergic, and degenerative) and five types of coagulograms and thromboelastograms (normal, hypocoagulating, hypercoagulating, prethrombotic, and acute fibrinolysis).

2/2

USSR

UDC 633.57:58.04

IMAMALIYEV, A. I., KOBLOV, R. K., and SEMYKINA, YE. YE., Institute of Experimental Plant Biology, Academy of Sciences Uzbek SSR

"Some Characteristics of the Penetration, Distribution and Transformation of Defoliating Captax Derivatives in Cotton Plants"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, No 2, 1971, pp 19-21

Abstract: In a study of the effect and metabolism of mercaptobenzothiazole (Captax) derivatives as defoliants, three 2-alkylthiobenzothiazoles were synthesized: ethylcaptax, butylcaptax, and heptylcaptax, which had labelled (³⁵S) sulfide sulfur. The specific radioactivity of these compounds was 0.38-0.50 mc/mk. The defoliants were applied to cotton of the 108-F type in the conventional way in the form of a 1% emulsion. The treated leaves were crushed and extracted with diethyl ether and subsequently with a 96% aqueous solution of ethanol. Of the three alkyl derivatives, ethylcaptax exhibited the greatest capability of penetrating the cotton plant leaves, whereas heptylcaptax was the least effective in this respect. No unchanged butylcaptax was found in seeds and fibers of immature pods. Apparently there are barriers impeding the appearance of the next transformation product of butylcaptax in

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USSR

IMAMALIYEV, A. I., et al., *Uzbekskiy Biologicheskiy Zhurnal*, No 2, 1971,
pp 19-21

the ripening fruit. However, this product penetrates into the seeds and fibers when the defoliant hits the pods. The butylcaptax entering the leaves is quickly transformed. It appears that the metabolism of all three alkyl derivatives of captax in the cotton plant is identical with retention of the benzothiazole moiety in the molecule.

2/2

USSR

UDC 620.10

KOBLOV, V. S.

"On a Conditional Margin of Plasticity Stability to Twisting of Roller-Type Components Under Conditions of Lowered Temperature"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Mashinostroyeniye, No 2, 1973, pp 162-164

Abstract: The results of experiments on stability and plasticity on twisting of roller-type components with stress concentrators, made of steels 54 and 40X with different thermal treatments, under low temperature conditions to -60°C are presented in graphical form. The theoretical coefficient of concentration may be calculated from the graphs which can also be used for designing and sizing such components for use under conditions of the far north.

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1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REACTIVITY OF COMPOUNDS WITH DIARYLMETHYLOL GROUPS. IV. BASICITY OF
SUBSTITUTED AMIDES OF DIARYLGLYCOLIC ACIDS -U-
AUTHOR-(04)-SHKLYAYEV, V.S., CHEKRYSHKIN, YU.S., KOBLOVA, A.I.,
PANTSURKIN, V.I.
COUNTRY OF INFO--USSR
SOURCE--ZH ORG KHIM. 1970, 6(5), 1055-61
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--AMIDE, CONDENSATION REACTION, AMINE DERIVATIVE, AROMATIC
CARBOXYLIC ACID, CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1270

STEP NO--UR/0366/70/006/005/1055/1061

CIRC ACCESSION NO--AP0134944

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134944

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONDENSATION OF MESITYLAMINE WITH
(CO SUB2 ET) SUB2 GAVE 2,4,6,ME SUB3 C SUB6 H SUB2 NHCOCO SUB2 ET, WHICH
WAS TREATED WITH RC SUB6 H SUB4 MGBR (R IS H, O-ME, M-ME, P-ME, O-MEO,
P-MEO, P-F, M-CL, P-CL; OR P-BR) TO GIVE 2,4,6,ME SUB3 C SUB6 H SUB2
NHCOCO(OH) (C SUB6 H SUB4 R) SUB2 (I). THE PK VALUES OF I DEPEND ON R.
THEY WERE CORRELATED WITH BROWN OKAMOTO SIGMA PRIME POSITIVE CONSTS.

FACILITY: PERM. FARM. INST., PERM, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ANALOGS OF COCCIDINE -U-
AUTHOR--(03)-PISKOV, V.B., OSANOVA, L.K., KOBLOVA, I.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3), 559-64.
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--ORGANIC NITROGEN COMPOUND, BENZENE DERIVATIVE, AMIDE,
TOXICITY, BIRD, VETERINARY MEDICINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/0552 STEP NO--UR/0366/70/006/003/0559/0564
CIRC ACCESSION NO--AP0108767
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0108767

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FOLLOWING 6-(R, SUBSTITUTED)
-3,5-DINITROBENZAMIDES (I) WERE PREPD. BY STD. REACTIONS (R GIVEN):
NHME, NME SUB2, NET SUB2, CL. OTHER SYNTHESIZED COCCIDINE ANALOGS WERE :
4 AMINO 3, 5 DINITROBENZAMIDE, 5 R SUBSTITUTED 2, 4 DINITROBENZLAMIDE (R
IS H OR CONH SUB2), N, N MINUS R PRIME1 DERIVS. OF 1 (R EQUALS ME), (R
PRIME1 EQUALS ME RPRIME2 OR ET); 2 MINUSR, 3 MINUSR PRIME1, 6 MINUSR
PRIME2 TR/SUBSTITUTED 5 NITROBENZAMIDES (R, R PRIME1, R GIVEN): H, NO
SUB2, H; NH SUB2, NO RSUB2, H; H, CL, CT), 2 METHYL 5 NITRO BETA
PICOLINAMIDE, AND 3 ACETAMIDO 5 NITROBENZONITRILE. THE TOXICITY OF
THESE COMPS. ON CHICKENS DOES NOT EXCEED THE TOXICITY OF 1 (R EQUALS
H); HOWEVER NONE HAS BETTER COCLIDOSTATIC ACTIVITY THAN 1 (R EQUALS H).

FACILITY: GOS. NAUCH.-KONTR. INST. VET. 9.

UNCLASSIFIED

USSR

UDC 621.378.33+535.8:535.241.13

NIKOLAYEV, I. V., KOBLOVA, M. M.

"Modulation of Optical Radiation on a Wavelength of 10.6 μ "

Moscow, Kvantovaya Elektronika, No 2, 1971, pp 57-64

Abstract: The authors investigated the optical and electro-optical properties of crystals of gallium arsenide (GaAs), and of cadmium sulfide, selenide and telluride (CdS, CdSe and CdTe) which are transparent on a wavelength of 10.6 μ . The crystals were studied to see if they could be used to modulate emission from lasers operating on a mixture of CO₂, He and H₂. The effectiveness of the crystals is compared with respect to the results of measurements. Computational formulas are presented and modulator designs are described. It was found that emission from a CO₂ laser can be modulated and that cadmium telluride is a promising material for this purpose. Further research is needed to find more effective materials and to develop circuits which enable a reduction in the controlling voltage using the same electro-optical materials. Six illustrations, two tables, bibliography of ten titles.

1/1

USSR

UDC 621.375.82

MIKAELIAN, A. L., KOBLOVA, M. M., ZASOVIN, E. A.

"Investigation of a Deflection System for a Ray Based on Lithium Niobate Crystals"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 1, Moscow, 1971, pp 120-124 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1143)

Translation: A discrete 10-cascade system for the deflection of laser radiation using lithium niobate crystals and Iceland spar was investigated. The beam was displaced at the output in two planes, forming a 32×32 matrix. The controlling voltage was equal to 1 kv. Authors abstract.

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USSR

UDC: 621.376:530.145.6

MIKAELYAN, A. L., KOBLOVA, M. M., ZASOVIN, E. A.

"Study of a Beam Deflection System Based on Lithium Niobate Crystals"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1, Moscow, 1971, pp 120-124 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D175)

Translation: The authors investigate a discrete ten-stage beam deflection system utilizing crystals of lithium niobate and Iceland spar. The beam is displaced in two planes at the output, forming a matrix of 32×32 . The controlling voltage is 1 kV. Four illustrations, bibliography of two titles.

1/1

USSR

SHLYKOV, Yu. P., KOBYAKOV, A. N.

"Heat Transfer with Forced Turbulent Flow of a Fluid at Supercritical Parameters"

Teplo. i Massoperenos. T. 2, Ch. 1 [Heat and Mass Transfer, Vol 2, Part 1 -- Collection of Works], Minsk, 1972, pp 3-15, (Translated from Referativnyy Zhurnal, Mekhanika, No 10, 1972, Abstract No 10 B808, by V. D. Vilenskiy).

Translation: Results are presented from a theoretical study of heat transfer as a fluid with supercritical state parameters flows through a pipe. The integral expression for the Nusselt number in the area of heat exchange stabilized over the length is used in the calculations. The turbulent transfer factor is described by Reichardt dependences, into which the dimensionless distance from the wall is introduced as

$$y^{+} = V_c \frac{1}{\nu_c} \int_0^y \frac{dy}{V}$$

where y is the distance from the wall, ν , ν_c are the local value and value at the wall of kinematic viscosity factor, V_c is the dynamic velocity.

1/2

USSR

SHLYKOV, Yu. P., KOBLYAKOV, A. N., Teplo. i Massoperenos. T. 2, Ch. 1, Minsk, 1972, pp 3-15.

Calculations are performed for the flow of water in a pipe 10 mm in diameter with a pressure of 245 bar and various values of mass velocity. The results show that for certain modes, heat transfer worsens. An analysis of the results produced is presented. An empirical dependence is presented, summarizing the results of calculations and certain experimental data.

2/2

3

USSR

UDC: 536.24.532.54

BARULIN, Yu. D., VIKHREV, Yu. V., DYADYAKIN, B. V., KOBLYAKOV, A. N.,
KON'KOV, A., LOKSHIN, V. A., SINITSYN, I. T., Editorial Staff of Inzh.
fiz. zh., Academy of Sciences of the Belorussian SSR

"Heat Exchange During Turbulent Flow of Water With Supercritical Parameters
of State in Vertical and Horizontal Pipes"

Teplootdacha pri turbulentnom techenii v vertikal'nykh i gorizonta'nykh
trubakh vody sverkhkriticheskikh parametrov sostoyaniya (cf. English above),
Minsk, 1970, 16 pp, ill. (No 2315-70 Dep.) (from RZh-Mekhanika, No 4, Apr
71, Abstract No 4B739 DEP)

Translation: The paper presents the results of an experimental study of
heat transfer during rising, descending and horizontal flow of water with
supercritical parameters of state in circular tubes. The experimental
values of the coefficients of heat transfer were found in the following
ranges of working parameters: pressure 225-265 bars; mass flowrates 480-
5000 kg/cm²·s; Reynolds number (12.5-450)·10³; specific thermal load 0.2-
6.5 MW/m²; flow temperature +50-500°C; wall temperature +60-750°C; inside

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BARULIN, Yu. D. et al., Teplootdacha pri turbulentnom techenii v vertikal'nykh i gorizonta'nykh trubakh vody sverkhkriticheskikh parametrov sostoyaniya, Minsk, 1970 (No 2315-70 Dep.)

diameter of the tubes $(3, 8, 20) \cdot 10^{-3}$ m; relative length up to 300. Experimental data are obtained on the effect which the direction of motion of the liquid flow has on heat exchange in the supercritical region. A study is made of the nature of the change in the coefficient of heat exchange on the initial section and around the perimeter of horizontal tubes. Bibliography of twelve titles. Authors' abstract.

USSR

UDC 612.84:358.4

KOBYANSKIY, V. V., Candidate of Medical Sciences, Lt Col Med Serv

"Changes in the Functional State of Fliers' Visual Analysors"

Moscow, Voenno-Meditsinskiy Zhurnal, No 10, 1972, pp 68-70

Abstract: The author describes a method for studying the changes in the functional state of the visual analyser of fighter pilots as they go through their duties under various conditions of illumination, during the day, at night, and with sharply varying brightness. The data used in the study related to keenness of vision, the rate of adaptation to darkness, the critical capacity for blending flashes, and the electrical sensitivity of the eye. Subjects of the research were 26-32 years old, were healthy and capable of service under any conditions. No significant variation in the average rate of adaptation to darkness was observed. Information regarding the dynamics of the critical capacity for blending flashes was supplied by the experiments and reflected the shifts in the functional state of the visual analyser and the central nervous system. A second group of fliers was used to study the functional state of the visual analyser in night flights, and still a third was used to study changes in visual functions during night flights with drastic variations in brightness levels. Results of the tests are given in tabular form.

1/1

- 1 -

1/2 021
UNCLASSIFIED
PROCESSING DATE--09OCT70
TITLE--THERMODYNAMICS OF METHYLHEXANE ISOMERIZATION -U-
AUTHOR--(04)--ROGANOV, G.N., KOBU, G.YA., ANDREYEVSKIY, D.N., NIKULIN, K.V.
COUNTRY OF INFO--USSR
SOURCE--NEFTEKHIMIYA 1970, 10(1), 16-21
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMODYNAMICS, HEXANE, ALKYL RADICAL, ISOMERIZATION, PHASE
EQUILIBRIUM, ENTROPY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1966
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PROCESSING DATE--09OCT70

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ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. EQUIL. WAS STUDIED IN THE SYSTEM
2-METHYLHEXANE (I), 3-METHYLHEXANE (II) IN THE LIQ. AND VAPOR PHASES AT
20-170DEGREES BY USING AlCl_3 SUB3 AS A CATALYST. FROM THE EQUIL. DATA
DELTAETADegrees SUB368 AND DELTASDegrees SUB368 WERE MINUS 24 PLUS OR
MINUS 50 CAL-MOLE AND MINUS 0.47 PLUS OR MINUS 0.1 EU. DIFFERENCE IN
ENTROPY OF I AND II CALCD. FOR ONE STEREOISOMER OF II IL OR DI WAS MINUS
1.85 EU BASED ON EQUIL. DATA. FACILITY: BELORUSS. GOS. UNIV.
IM. LENINA, MINSK, USSR.

UNCLASSIFIED

Explosives and Explosions

USSR

UDC 541.124/.128

STRAKHOV, B. V. LEBEDEV, V. P. (DECEASED), and KOBOZEV, N. I.,
Moscow State University imeni M. V. Lomonosov, Moscow, Ministry
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"Explosive Oxidation of Nitrous Oxide in Mixtures with Ozone"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 7, Jul 70, pp
1664-1669

Abstract: The formation of NO upon explosion of $N_2O + O_3$ mixtures by means of an electric spark was studied. At an initial pressure of 200 mm Hg, the maximum yield of NO (14.9 vol %) was obtained at 40 vol % O_3 . For mixtures with a constant O_3 content of 40 vol %, the maximum yield of NO in the 0-900 mm Hg pressure range was at 200 mm Hg. Partial replacement of N_2O with N_2 lowered the yield of NO. Calculations on the assumption that the reaction proceeded by the mechanism $N_2 + O_2 \rightarrow 2NO$ after decomposition of N_2O led to results which did not agree with data on the reaction equilibrium obtained in the experiments. The experimental results could be explained satisfactorily with respect to development of an NO yield maximum and the position of this maximum by assuming the mechanism $N_2 + 1/2 O_2 \rightleftharpoons 2NO$; $2NO \rightleftharpoons N_2 + O_2$.

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--RECOVERY OF ENERGY DURING CATALYSIS ON ADSORPTION CATALYSTS. II.
SPECIFIC ACTIVITY -U-
AUTHOR--(04)-FCMINA, A.P., SHEKHUBALOVA, V.I., POSPELOVA, I.A., KOBOZEV,
~~N.I.~~
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 366-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PLATINUM, CATALYSIS, CATALYTIC DECOMPOSITION, HYDROGEN
PEROXIDE
CONTROL MARKING--NO RESTRICTIONS
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PROXY REEL/FRAME--3002/1187 STEP NO--UR/0076/70/044/002/0366/0369
CIRC ACCESSION NO--AP0120605
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PROCESSING DATE--20NOV70

CIRC ACCESSIGN NO--AP0128605

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CURVES OF SP. ACTIVITY FOR 2 SERIES OF ADSORPTIONAL PT CATALYSTS FOR THE DECOMPN. OF H SUB2 O SUB2 WERE ANALYZED. THE CATALYSTS WERE PT-SIO SUB2 WITH SURFACE AREA 180 OR 375 M PRIME2-G. THE CURVES SHOWED AN INCREASE OF SP. ACTIVITY AT HIGHER CONCNS. OF PEROXIDE. RESULTS INDICATED THE PRESENCE OF 2 TYPES OF ACTIVE CENTERS DURING THE REACTION: (PT SUB1) TYPICAL FOR CATALYTIC PROCESS, AND (PT SUB2) MORE COMPLEX AND WHICH PLAYS A BASIC ROLE IN THE EFFECT OF THE RECOVERY (OR RECUPERATION) OF ENERGY IN THE H SUB2 O SUB2 CATALYSIS. THE PARABOLIC SHAPE OF THE ACTIVITY CURVES, I.E., INCREASE HIGHER ISOTHERMIC ENERGY EVOLUTION ACTIVATION AS A RESULT OF HIGHER H SUB2 O SUB2 CONCNS., EVIDENCED A HIGH ENERGETIC ACTIVATION OF PT CENTERS ON THE CARRIER AS THE PT CENTERS DREW CLOSER. THUS, THE ENERGY LIBERATED IN EXOTHERMIC REACTION IS, APPARENTLY, PARTIALLY RECOVERED AND UTILIZED TO INCREASE THE YIELD PRODUCED BY ACTIVE CENTERS. THE RESULTS, THEREFORE, APPEAR CONSISTENT WITH THE THEORY OF ENERGY RECUPERATION INCATALYSIS, DEVELOPED BY V. V. MAZHUGA (1967). FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 021
UNCLASSIFIED
TITLE--NEUROPHYSIOLOGICAL CHARACTERISTIC OF THE POSTERIOR VENTRAL NUCLEUS OF THE THALAMUS -U-
AUTHOR--KUBOZEV, V.S.
PROCESSING DATE--20NOV70
COUNTRY OF INFO--USSR
SOURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 191, APR. 11, 1970, P. 1189-1192
DATE PUBLISHED--11APR70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NEURON, BRAIN, NEUROPHYSIOLOGY, SENSORY PHYSIOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/1484
STEP NO--UR/0020/70/191/000/1189/1192
CIRC ACCESSION NO--ATC130413
UNCLASSIFIED